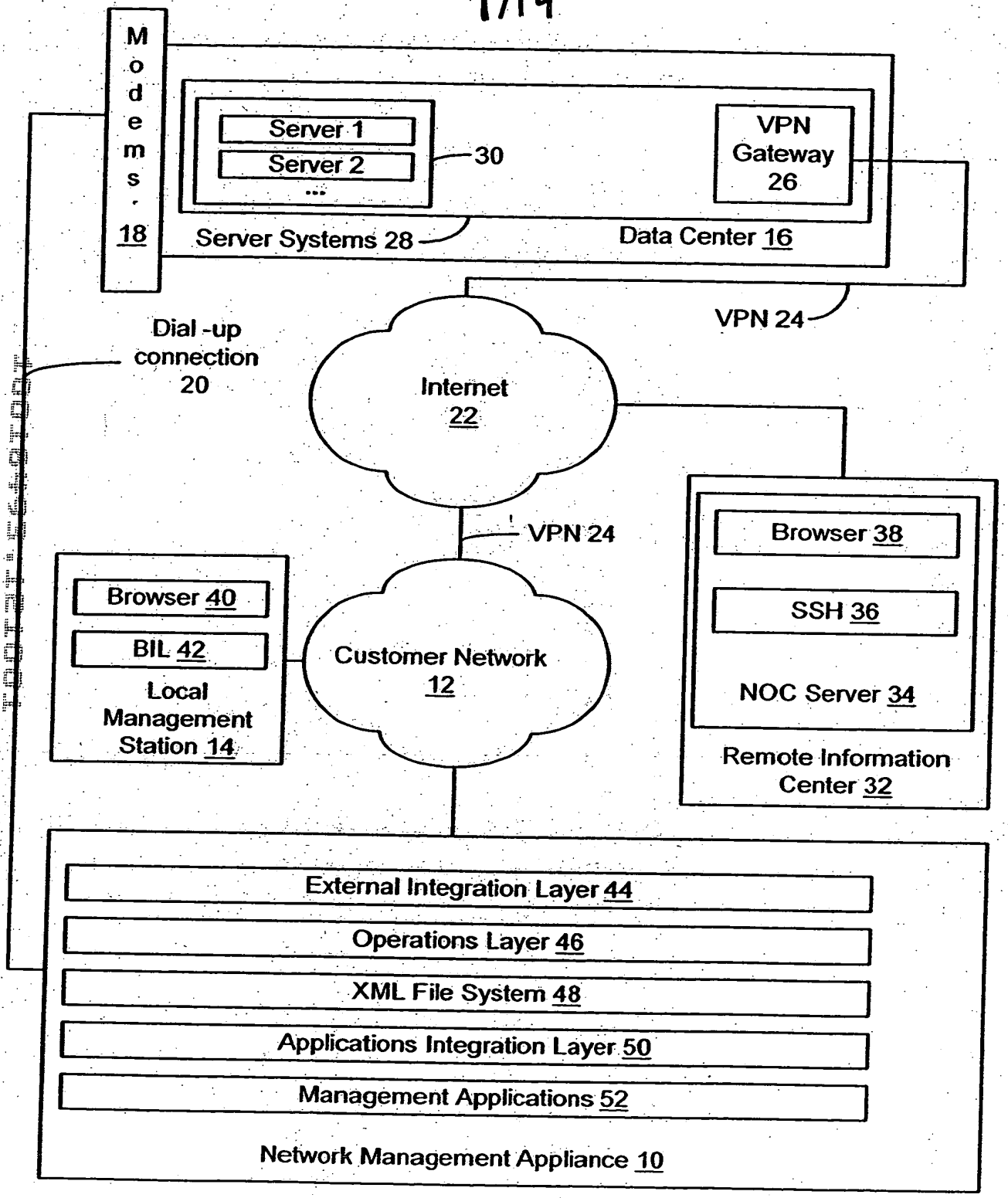
Modems 18
Server 1
Server 2
...
30
Server Systems 28
VPN Gateway 26
Data Center 16
VPN 24
Dial-up connection 20
Internet 22
VPN 24
Browser 38
SSH 36
NOC Server 34
Remote Information Center 32
Browser 40
BIL 42
Local Management Station 14
Customer Network 12
External Integration Layer 44
Operations Layer 46
XML File System 48
Applications Integration Layer 50
Management Applications 52
Network Management Appliance 10

Fig. 1

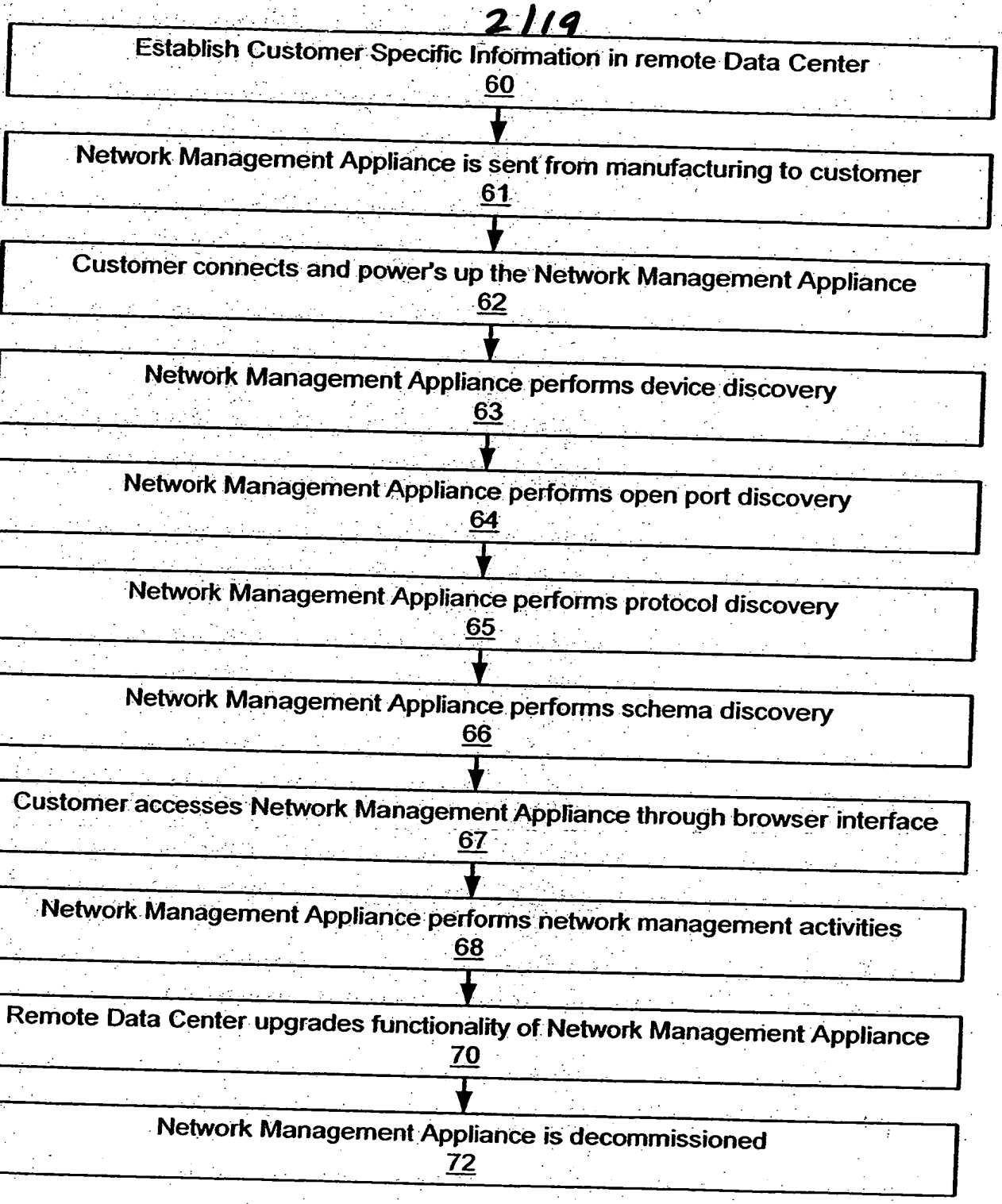
Establish Customer Specific Information in remote Data Center
60
Network Management Appliance is sent from manufacturing to customer
61
Customer connects and power's up the Network Management Appliance
62
Network Management Appliance performs device discovery
63
Network Management Appliance performs open port discovery
64
Network Management Appliance performs protocol discovery
65
Network Management Appliance performs schema discovery
66
Customer accesses Network Management Appliance through browser interface
67
Network Management Appliance performs network management activities
68
Remote Data Center upgrades functionality of Network Management Appliance
70
Network Management Appliance is decommissioned
72

Fig. 2

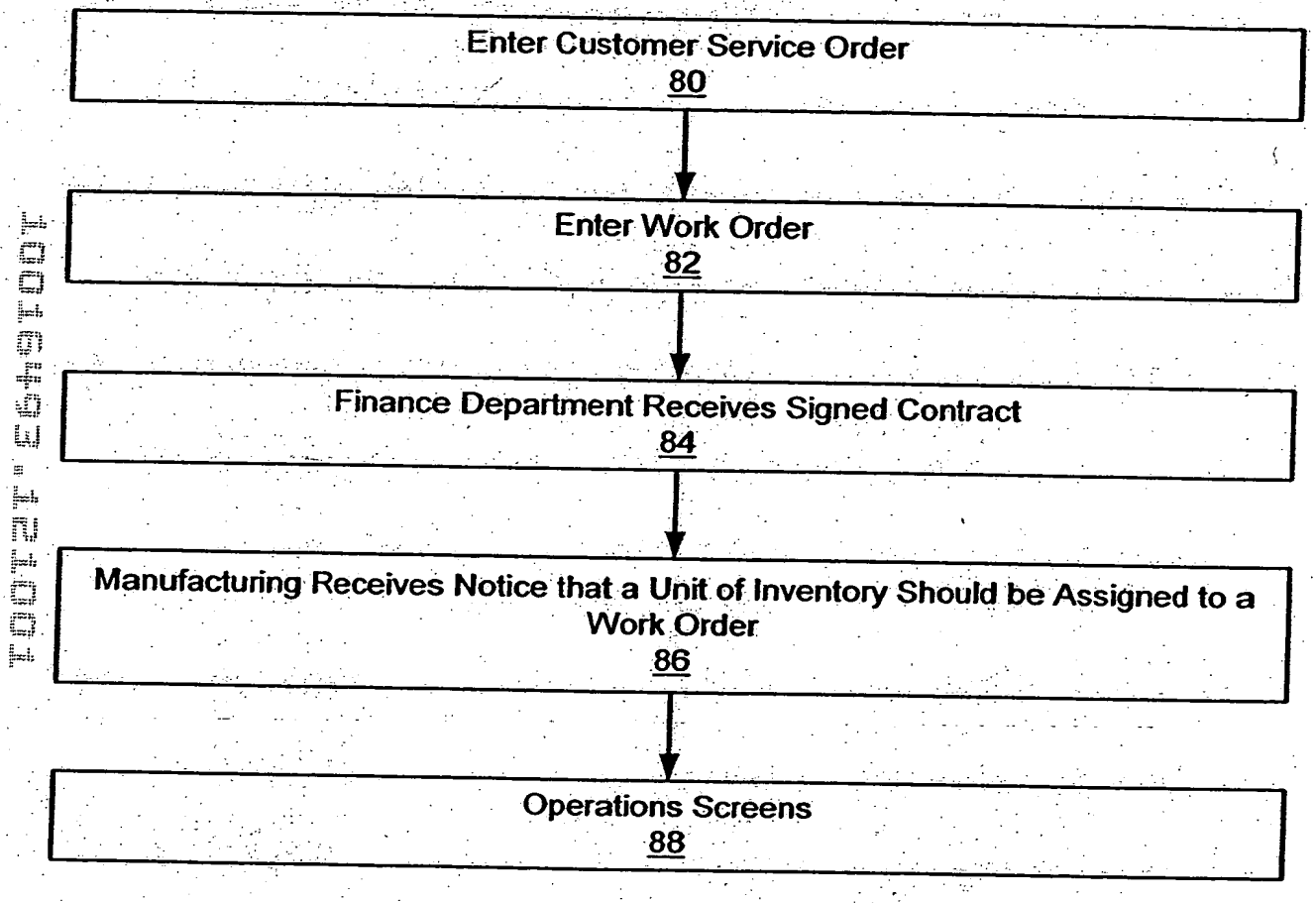
Enter Customer Service Order
80
Enter Work Order
82
Finance Department Receives Signed Contract
84
Manufacturing Receives Notice that a Unit of Inventory Should be Assigned to a Work Order
86
Operations Screens
88

Fig. 3

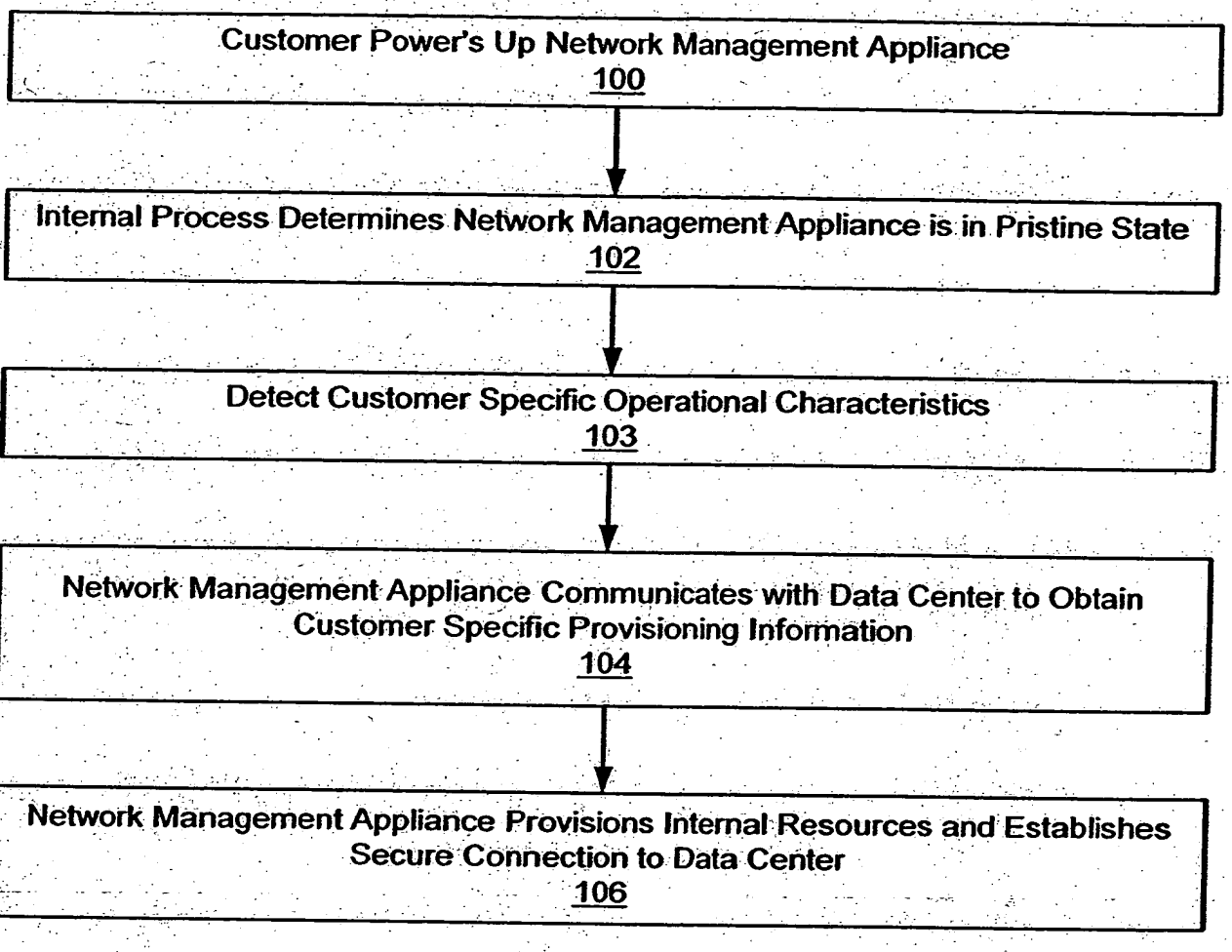
Customer Power's Up Network Management Appliance
100
Internal Process Determines Network Management Appliance is in Pristine State
102
Detect Customer Specific Operational Characteristics
103
Network Management Appliance Communicates with Data Center to Obtain Customer Specific Provisioning Information
104
Network Management Appliance Provisions Internal Resources and Establishes Secure Connection to Data Center
106

Fig. 4

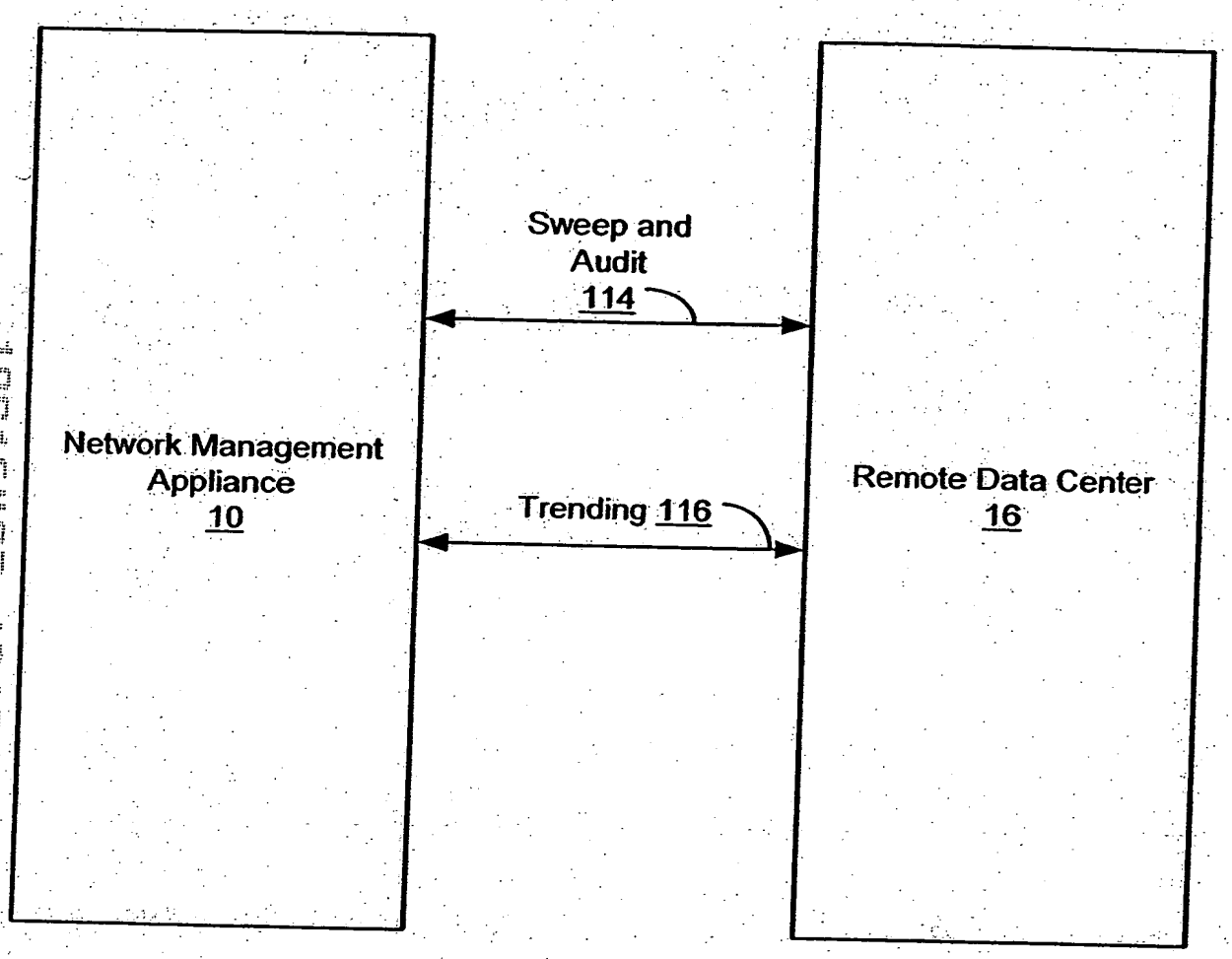
Network Management Appliance 10
Sweep and Audit 114
Trending 116
Remote Data Center 16

Fig. 5

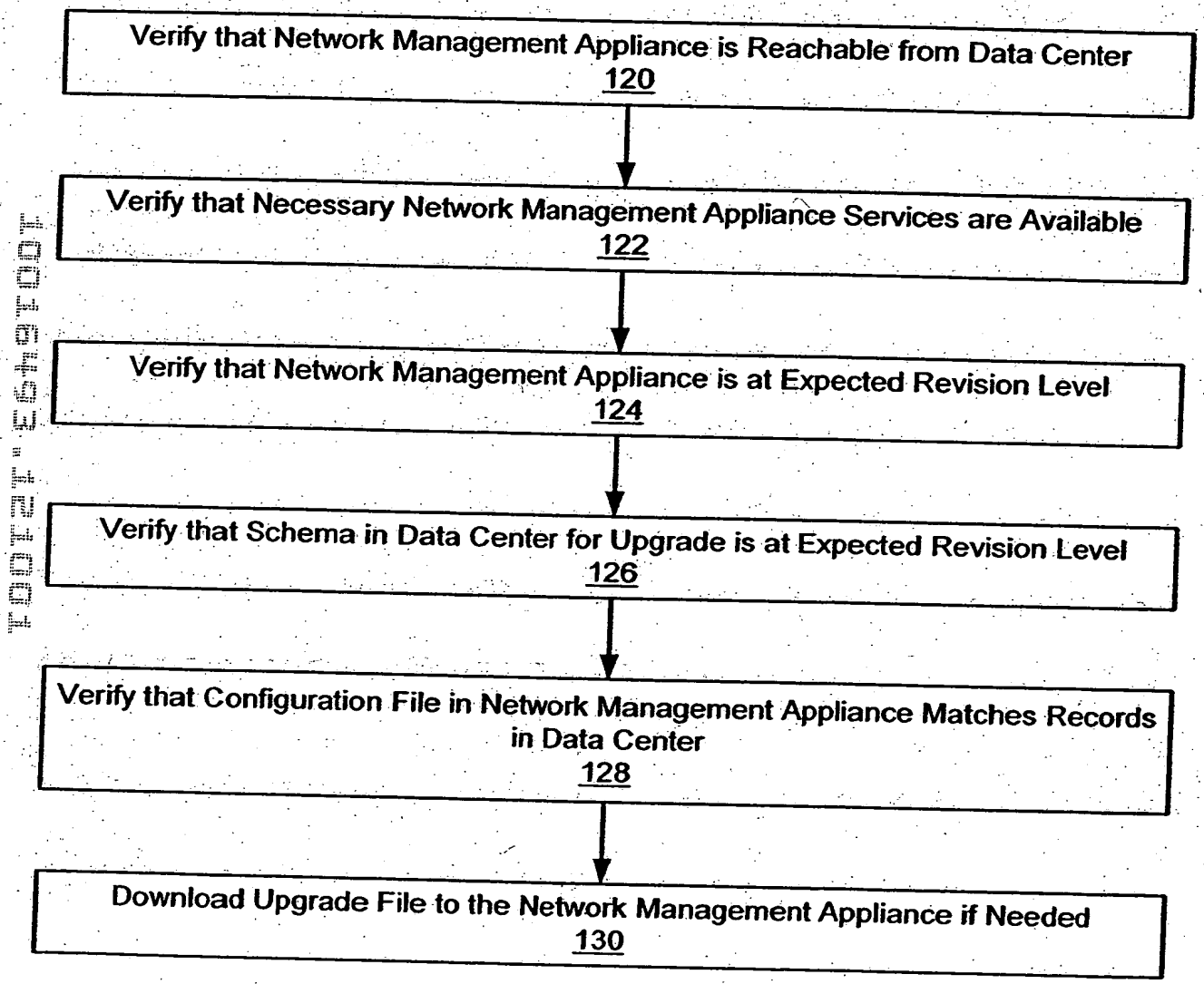
Verify that Network Management Appliance is Reachable from Data Center
120
Verify that Necessary Network Management Appliance Services are Available
122
Verify that Network Management Appliance is at Expected Revision Level
124
Verify that Schema in Data Center for Upgrade is at Expected Revision Level
126
Verify that Configuration File in Network Management Appliance Matches Records in Data Center
128
Download Upgrade File to the Network Management Appliance if Needed
130

Fig. 6

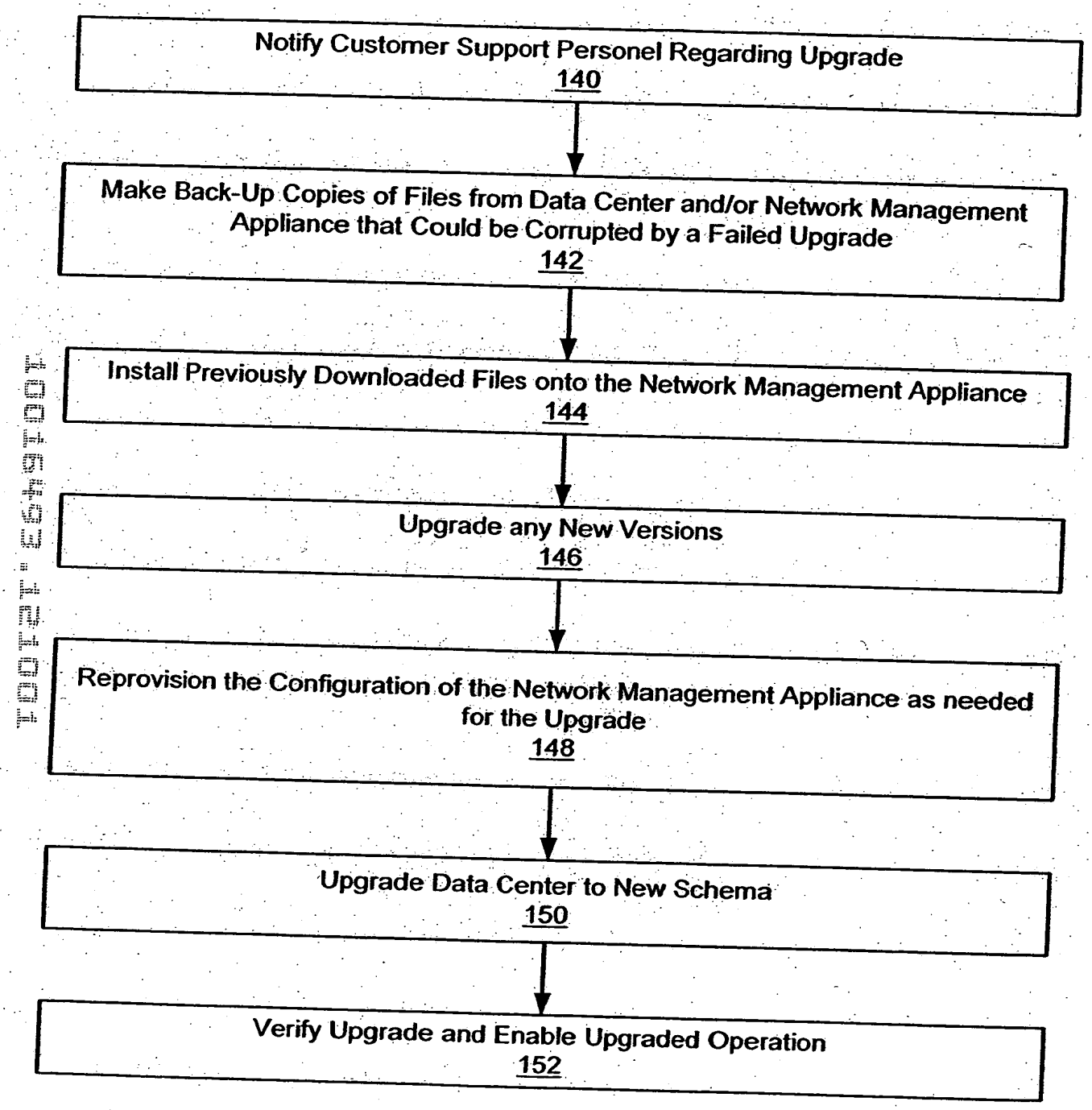
Notify Customer Support Personel Regarding Upgrade
140
Make Back-Up Copies of Files from Data Center and/or Network Management Appliance that Could be Corrupted by a Failed Upgrade
142
Install Previously Downloaded Files onto the Network Management Appliance
144
Upgrade any New Versions
146
Reprovision the Configuration of the Network Management Appliance as needed for the Upgrade
148
Upgrade Data Center to New Schema
150
Verify Upgrade and Enable Upgraded Operation
152

Fig. 7

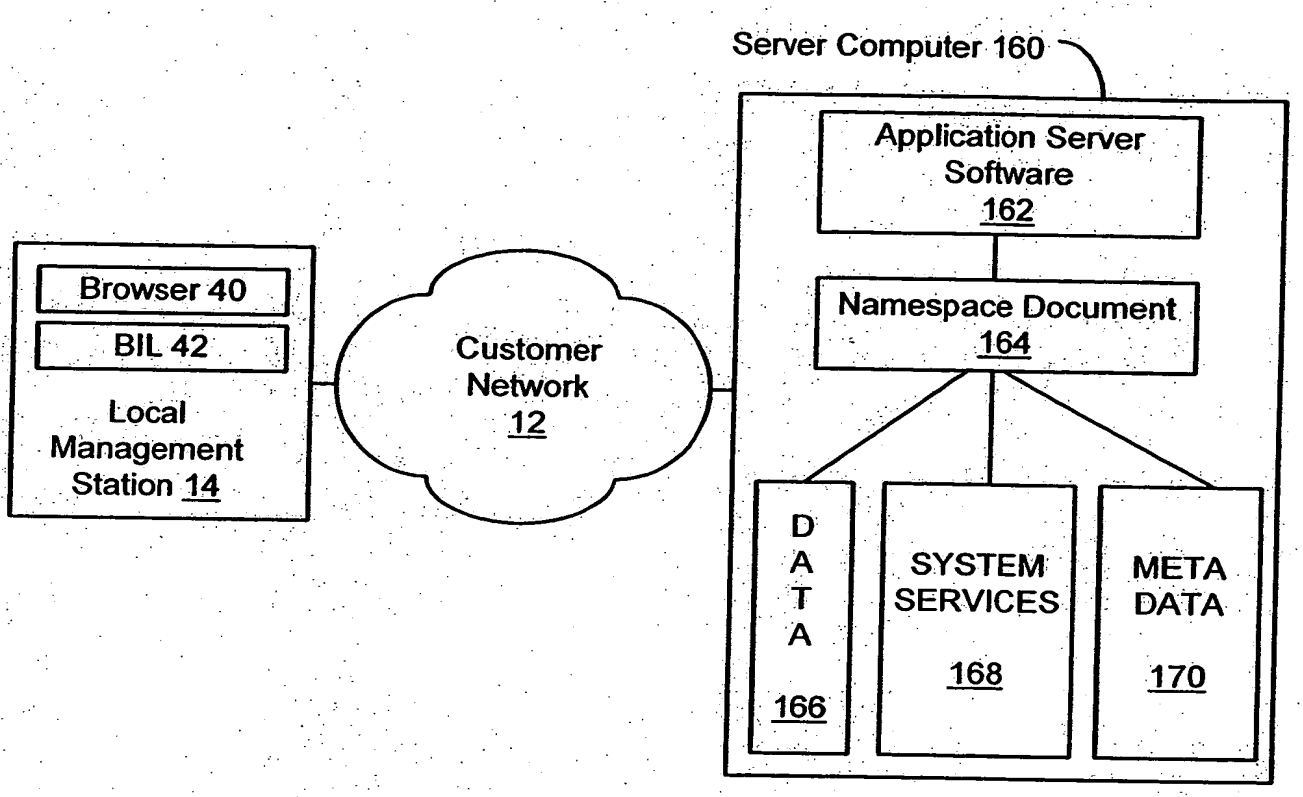
Server Computer 160
Application Server Software 162
Namespace Document 164
Browser 40
BIL 42
Local Management Station 14
Customer Network 12
DATA 166
SYSTEM SERVICES 168
META DATA 170

Fig. 8

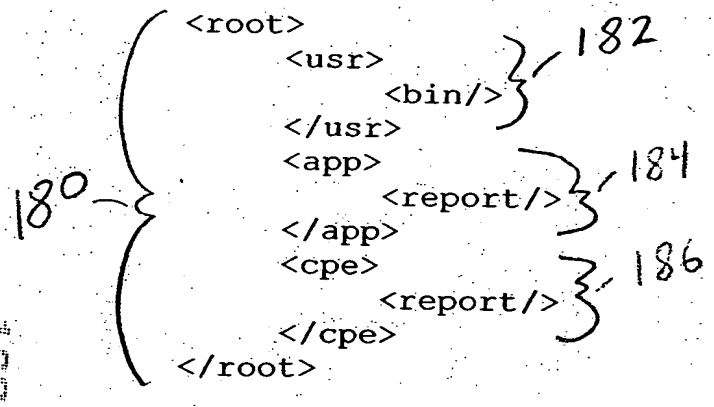

Fig. 9

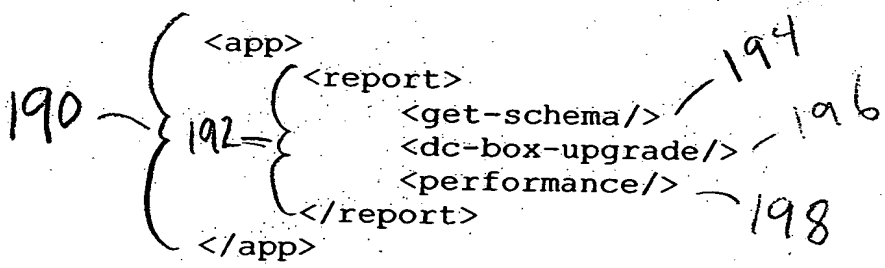

Fig. 10

Express Mail Label No. EV 339 694 021

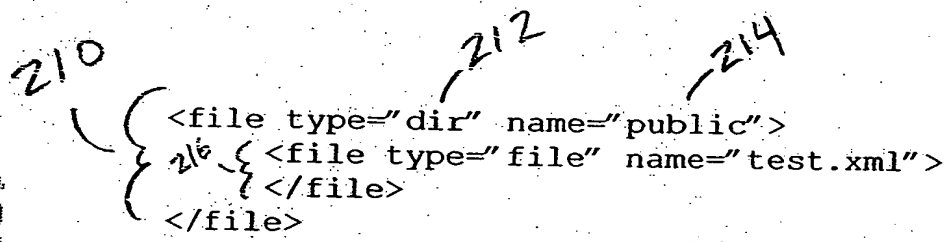

Fig. 11

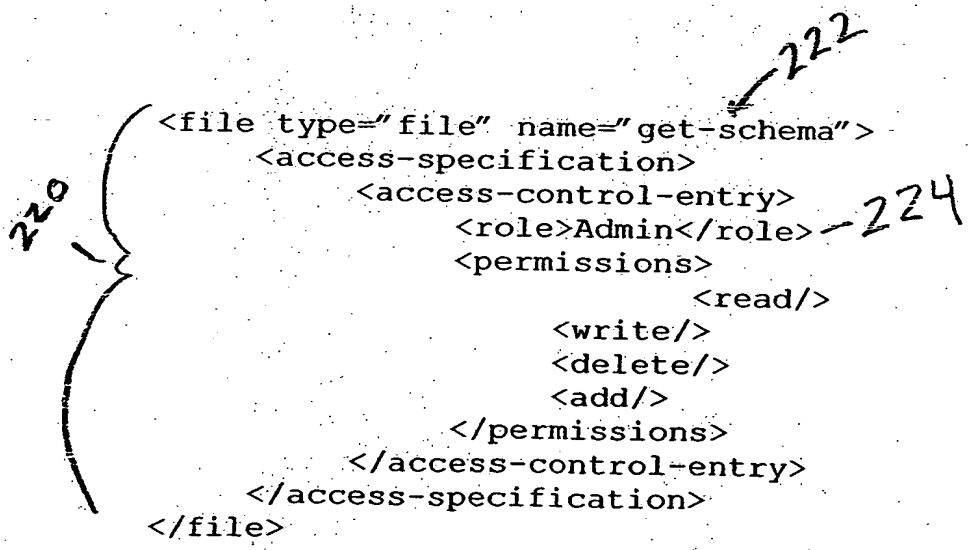

Fig. 12

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```
<file type="dir" name="public">
    <file type="file" name="test.xml">
        <physical type="xml">
            <file>/usr/local/system/mytest.xml</file>
        </physical>
    </file>
</file>
```

230, 232, 234

Fig. 13

```
<file type="dir" name="public">
    <file type="file" name="get-schema">
        <physical type="xlet">
            <language type="perl"
class="/usr/local/silverback/bin/get-schema.pl"/>
        </physical>
    </file>
</file>
```

240, 242, 244

Fig. 14

12/19

```
<root>
    <usr>
        <bin/>
    </usr>
    <app>
        <report/>
    </app>
    <cpe>
        <report/>
    </cpe>
    <system>
        <file type="dir" name="root">
            <file type="dir" name="usr">
                <file type="file" name="bin"/>
            </file>
            <file type="dir" name="app">
                <file type="file" name="report"/>
            </file>
            <file type="dir" name="cpe">
                <file type="dir" name="report"/>
                    <access-specification>
                        <access-control-entry>
                            <role>Admin</role>
                            <permissions>
                                <read/>
                                <write/>
                                <delete/>
                                <add/>
                            </permissions>
                        </access-control-entry>
                    </access-specification>
                    <file type="file" name="get-schema">
                        <physical type="xlet">
                            <language type="perl"
class="/usr/local/silverback/bin/upgrade/get-
                                                schema.pl"/>
                        </physical>
                    </file>
                    <file type="file" name=
                            "performance.xml">
                        <physical type="xml">

<file>/usr/local/system/screens/
                                performance.xml</file>
                        </physical>
                    </file>
                </file>
            <file>
```

Fig. 15(a)

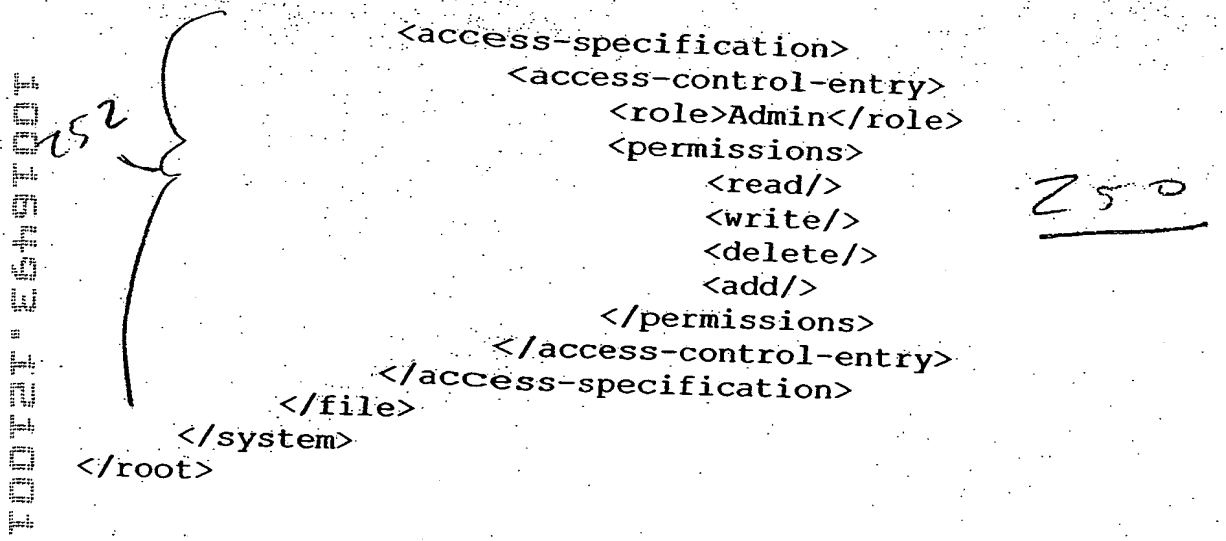
1502
250
<access-specification>
<access-control-entry>
<role>Admin</role>
<permissions>
<read/>
<write/>
<delete/>
<add/>
</permissions>
</access-control-entry>
</access-specification>
</file>
</system>
</root>

Fig. 15(b)

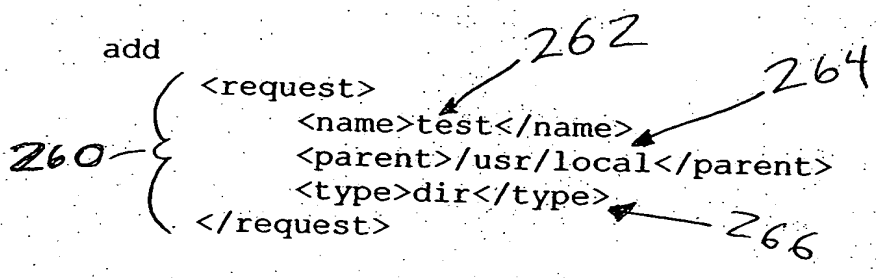

Fig. 16

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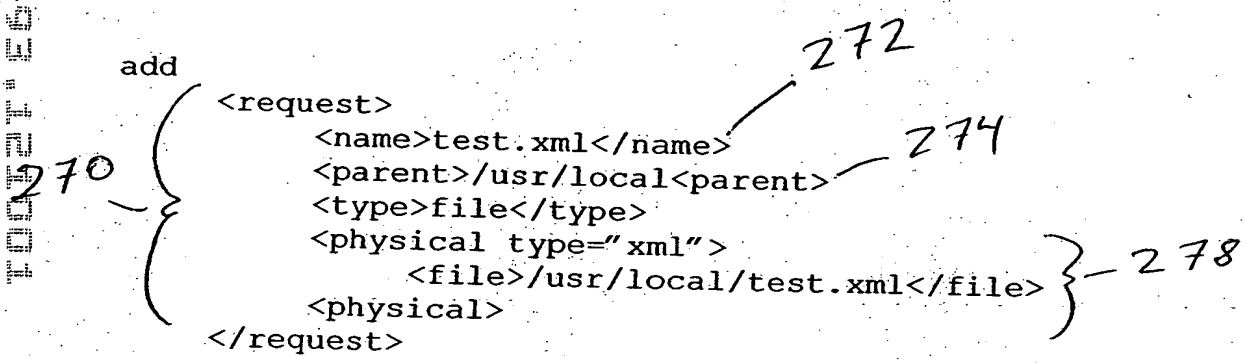

Fig. 17

```
add
    <request>
        <name>get-schema</name>
        <parent>/usr/local<parent>
        <type>file</type>
        <physical type="xml">
            <language type="perl"
            class="/usr/local/silverback/bin/upgrade/
                get-schema.pl"/>
        <physical>
    </request>
```

280

282

Fig. 18

```
add
    <request>
        <name>test</name>
        <parent>/usr/local<parent>
        <type>dir</type>
        <access-specification>
            <access-control-entry>
                <role>Admin</role>
                <permissions>
                    <read/>
                    <write/>
                    <delete/>
                    <add/>
                </permissions>
            </access-control-entry>
        </access-specification>
    </request>
```

290

292

294

Fig. 19

```
300 <reply>
        <status>
            <code></code>      302
            <message></message>    304
        </status>
    </reply>
```

Fig. 20

```
cp
310 <request>
        <source>/usr/local/test</source>
        <target>/usr/local/test2</target>
    </request>
```

Fig. 21

```
mv
320 <request>
        <source>/usr/local/test</source>
        <target>/usr/local/test2</target>
    </request>
```

Fig. 22

```
rm
    <request>
330     <source>/usr/local/test</source>
    </request>
```

Fig. 23

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```
<reply>
    <status>
        <code></code>
        <message></message>
    </status>
</reply>
```

Fig. 24

```
dir
    <request>
        <xpath>/usr</xpath>
    </request>
```

Fig. 25

```
<reply>
    <directory>
        <get-schema/>
        <performance/>
        <report/>
    </directory>
    <status>
        <code></code>
        <message></message>
    </status>
</reply>
```

Fig. 26

```
dir
    <request>
        <xpath>/usr</xpath>
        <detail>true</detail>
    </request>
```

370 372

Fig. 27

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```
<reply>
    <directory>
        <get-schema>
            <type>xlet</type>
            <physical type="xlet">
                <language type="perl"
class="/usr/local/silverback/bin/upgrade/get-schema.pl"/>
            </physical>
        </get-schema>
        <performance>
            <physical type="xml">

    <file>/usr/local/system/screens/performance.xml
    </file>
            </physical>
        </performance>
        <report>
            <type>dir</type>
        </report>
    </directory>
    <status>
        <code></code>
        <message></message>
    </status>
</reply>
```

380

Fig. 28

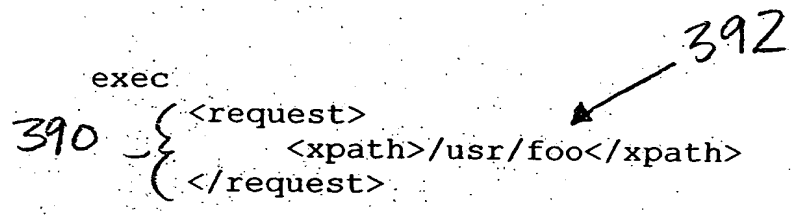
392
exec
390
<request>
<xpath>/usr/foo</xpath>
</request>

Fig. 29

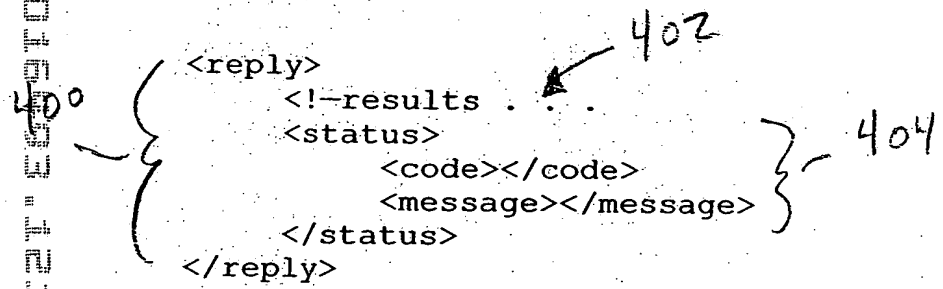
402
400
<reply>
<!-results . . .
<status>
<code></code>
<message></message>
404
</status>
</reply>

Fig. 30